

ENERGY POLICY UPDATE

May 5, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environmentrelated publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email Gloria Castro.

UPCOMING WEBINARS Behavior-Based Energy Efficiency

Thursday, May 8, 1:00 p.m. – 2:15 p.m. MST
This webinar is being hosted jointly by SEE Action Network & ACEEE. Advanced registration is required. Space is limited.

Leveraging Ratepayer Programs to Cut Industrial Energy Use

Thursday, May 15, 11:00 a.m. – 12:30 p.m. MST
This webinar is being hosted by the Clean Energy Solutions
Center in partnership with the Institute for Industrial
Productivity & the SEE Action
Network. Advanced registration is required. Space is limited.
Click here to register.

The 2014 Farm Bill's Renewable Energy for America Program

Wednesday, May 21, 3:00 p.m. - 4:00 p.m. Eastern Daylight Time. Learn how to join the webinar. Webinar Sponsor: Wind Program Stakeholder Engagement & Outreach Initiative

ENERGY STAR Webinars

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The Arizona Republic now has limited access. As such, links may or may not work.

ARIZONA-RELATED

After Disaster, Windmill Could Power Your Phone

[AzCentral.com, May 1] Imagine your home is destroyed by a tornado or hurricane. There's no electrical power for miles and the battery on your cell phone is dying. That's the scenario a group of Northern Arizona University students were imagining as they set out to engineer a portable windmill that can generate enough energy to power small devices in cases of emergency. This weekend, the students will put their invention to the test against schools from across the country in the inaugural Department of Energy Collegiate Wind Competition in Las Vegas.

Agua Caliente 290MW Solar PV Plant Complete

[Solar Novus Today, Apr. 29] NRG Energy, Inc. through its wholly-owned subsidiary NRG Solar, along with partner MidAmerican Solar announced they have achieved substantial completion at their Agua Caliente Solar Photovoltaic Facility, a 290 megawatt (MW) thin-film photovoltaic facility located on 2400 acres of land between Yuma and Phoenix, Ariz. The electricity that is generated by the station, which can support 230,000 homes at peak capacity, is being sold to Pacific Gas & Electric Company (PG&E) under a 25-year power purchase agreement. The Agua Caliente project uses clean solar power to avoid the annual emission of approximately 324,000 tons of carbon dioxide into the atmosphere, which is the equivalent of taking nearly 70,000 cars off the road. The creation of 400 jobs during the project's construction provided a boost to the local economy and it benefits the environment by producing clean, renewable energy. The project received a \$967 million loan guarantee from the US Department of Energy's Loan Programs Office.

Bonded Logic Breaks Ground in Chandler on Large Solar Energy Project

[Phoenix Business Journal, Apr. 29] Bonded Logic Inc., a Chandler-based manufacturer of environmentally-friendly building materials, broke ground today on what is being touted as one of the largest private solar energy projects in Arizona. The Talons Solar Field will have 1,300 solar panels covering 65,000 square feet in back of the company's manufacturing facility. The system will generate 332 kilowatts of electricity, which is enough to power 60 average households for a year, said Sean Desmond, Bonded Logic's director of sales and marketing. "Everything we do is with sustainability in mind," Desmond told me today. "Taking this step to add renewable energy to our manufacturing process is something we've wanted to do for a long time." The solar panels are expected to produce up to 26 percent of the company's average electrical bill. Bonded Logic has 130,000 square feet of property off Arizona Avenue between Chandler Heights and Riggs roads. Salt River Project is offering the company a 10 cent per watt incentive up to \$30,000 through the

U.S. Dept. of Energy Tribal Renewable Energy Webinar Series for 2014 SRP Commercial Solar Electric Program, designed to encourage investment in solar technology by helping to reduce the system's cost.

Electric-Vehicle Charging Stations Will Stick Around Phoenix

[Phoenix Business Journal, May 5] Nissan Leaf and Tesla owners still will have several places to charge up around the Valley. AZCentral.com reports more than 400 Blink Network charging stations will remain in operation across Phoenix and its suburbs, even though revenue has been minimal and the original operator of those stations, Ecotality Inc., went out of business.

Large New Solar Arrays Unveiled at ASU

[Arizona Republic, Apr. 28] Arizona Public Service Co. officials helped unveil large new solar arrays at Arizona State University on Monday and used the occasion to emphasize the importance of solar to the utility despite recent dustups over the technology. APS is providing performance-based incentives that will cover as much as 40 percent of the \$3 million expense of the systems, or \$1.2 million, if they produce electricity as expected during the next 20 years. The funding from APS comes from a tariff on customer bills. The event coincided with the Solar Electric Power Association releasing annual rankings of utilities' solar use, with APS ranking No. 3 nationwide last year in the total amount of solar added to its grid and No. 4 for the amount of solar added per customer. Arizona ranked the No. 2 state nationwide behind California for the most solar installed.

Proposed Gas Pipeline Divides Southern Arizona Valley

[Arizona Republic, May 5] SASABE, Ariz. - The charms of the Altar Valley may not be obvious to outsiders. Devil's claw, saguaros and spiny cholla dot the desert grasslands and rugged arroyos of this harsh, fragile landscape. The isolated ranches that break its seeming sparseness are few and very far between. It takes time and stillness to notice what else is here: the furtive foxes and coyotes, the reclusive bobcats, the shy roadrunners and jackrabbits. Soon, the sense of remoteness and emptiness that attracted those who live here may bring a change that many fear will alter it forever: a proposed \$204 million natural-gas pipeline that would carve a swath 60 miles long and 75 to 100 feet wide from Tucson to the Mexican border, near the town of Sasabe. "That pinche pipeline is going to go right through Sasabe, right through my ranch, destroy all the conservation work we've done and provide a superhighway for drug and people smugglers," Melissa Owen said from the porch of her ranch house at the foot of the Pozo Verde Mountains. ("Pinche," in Mexican Spanish, roughly translates to "damned.") The pipeline would be built by Texas-based energy company Kinder Morgan Inc. through a limited-liability affiliate. Sierrita Gas Pipeline. The 36-inch-diameter Sierrita pipeline would connect to a Mexican pipeline nearing completion. It would carry up to 200 million cubic feet of gas a day to Mexican power plants in Sonora and Sinaloa. In March, the Federal Energy Regulatory Commission essentially gave the project its blessing. The commission acknowledged that re-establishing vegetation along the pipeline route might take an average of 76 years (two to 13 years for some types). But the commission concluded that, aside from affecting the endangered Pima pineapple cactus, building and operating the pipeline would pose no significant harmful environmental impacts. The finding is hotly disputed by, among others, Pima County Administrator Chuck Huckelberry. He is demanding more than \$16 million from Kinder Morgan to address various impacts for which he says FERC is not requiring enough remediation. Those range from environmental impacts to anticipated road repairs to increased costs for the county medical examiner to handle the bodies of additional undocumented migrants who may die in the desert while using the pipeline's right of way.

Tesla Assessing Sites That Allow for Quick Launch of Massive Battery Manufacturing Plant

[RenewableEnergyWorld.com, May 2] LOS ANGELES – Tesla Motors Inc.'s Elon Musk is close to naming sites in at least two U.S. states for a planned battery "gigafactory" and will break ground at each to ensure one is ready to supply lithium-ion packs when needed. Tesla, planning to add a mass-market electric car in about three years, said in February that it would build the world's largest battery plant and is assessing sites in Arizona, Nevada, New Mexico and Texas. Lowercost battery packs are needed to ensure Tesla's proposed less-expensive model gets to market on time, Musk said. Tesla's home state of California isn't a candidate due to timing requirements for regulatory reviews. "What we're going to do is move forward with more than one state, at least two, all the way to breaking ground, just in case there's last-minute issues," Musk, Tesla's chief executive officer, said in an interview this week. "The No. 1 thing is we want to minimize the risk timing for the gigafactory to get up and running." The new plant, requiring as much as \$5 billion to build and ultimately employing as many as 6,500 people, is part of Musk's vision of turning Palo Alto, California-based Tesla into the world's dominant electric-car maker. Along with making batteries that are 30 percent cheaper than are now available, the plant would supply packs to Musk's SolarCity Corp., letting homes and buildings with solar panels store energy they generate.

ALTERNATIVE ENERGY & EFFICIENCY

Offshore Wind To Grow 6-Fold, Aiding Suzlon, Vestas: HSBC

[Bloomberg, May 1] Offshore wind power is set to grow six-fold by 2020, benefiting turbine makers Suzlon Energy Ltd. (SUEL), Vestas Wind Systems A/S and Gamesa Corp. Tecnologica SA, HSBC Holdings Plc said. Total global installed capacity of wind turbines at sea is forecast to rise to 43 gigawatts by 2020 from 6.5 gigawatts at the end of 2013, the bank said today in an e-mailed report. The U.K., with 11 gigawatts. China with 10 gigawatts and Germany with 7 gigawatts will be the biggest offshore wind markets. The opportunity for manufacturers "is significant in our view and justifies a strategic long-term focus on the offshore segment," analysts including Charanjit Singh in Bangalore and Sean McLoughlin in London wrote in the HSBC report. After 2015, "the rapid growth in offshore installations becomes a key to driving growth in wind technology," they said. European nations including the U.K., Germany and Denmark are leading a push to develop wind farms at sea, where less opposition from locals allows the erection of larger machines that can reap more power from winds blowing more reliably than on land. It's part of their effort to reduce reliance on fossil fuels and carbon emissions that cause global warming. HSBC sees installations totaling 28.5 gigawatts in Europe by 2020, 13.5 gigawatts in Asia and 1 gigawatt in the U.S. That compares with the 41.5 gigawatts that Bloomberg New Energy Finance predicts, including 28.3 gigawatts in Europe, 12 gigawatts in Asia and 1.2 gigawatts in the U.S.

Utility Customer Assistance Rivals That of Federal Government

[Fierce Energy, Apr. 30] Utilities contributed nearly \$3.7 billion in assistance to low income customers in 2012, according to a report compiled by the American Gas Association (AGA) -- via discounted rates, arrearage forgiveness, weatherization, and efficiency programs and support provided to charitable organizations that provide resources for customers in need. Hardship funds, discounted rates, and arrearage forgiveness accounted for nearly \$3 billion in 2012. Natural gas and electric utilities also spent nearly \$695 million on conservation programs that deliver weatherization services and equipment repair or replacement at little or no cost. Utilities also play a major role in fundraising and providing administrative assistance to private charities that raised \$20 million from utility employees, shareholders and the public in 2012. This utility funding was roughly equal to the fiscal year 2012 federal energy assistance funding of \$3.47 billion in Low Income Heating Energy Assistance Program (LIHEAP) grants, \$207 million in U.S. Department of Energy (DOE) weatherization assistance program (WAP) funds, and \$10 million in American Recovery and Reinvestment Act funds designated for leveraging DOE WAP funds, according to AGA.

ENERGY/GENERAL

Carbon Dioxide Beat Historic Level Every Day Last Month

The amount of carbon dioxide in the atmosphere averaged more than 400 parts per million throughout April, the first time the planet's monthly average has surpassed that threshold. The data from the Scripps Institution of Oceanography at the University of California, San Diego, shows how world leaders are failing to rein in greenhouse gases that climate scientists say are warming the planet. "We're running out of time, but not solutions," Ed Chen, a spokesman for the Natural Resources Defense Council, said in an e-mail today. "The next big step is to limit, for the first time, carbon pollution being spewed by our power plants." The average value for April was measured at 401.33 ppm at the Mauna Loa monitoring station in Hawaii, according to an announcement on Twitter disclosing the finding by the institution's Keeling Curve program. It was named for the scientist who began the measurements in 1958 and shows that temperatures are rising more quickly. The finding adds to concerns that a buildup of carbon dioxide is damaging the atmosphere, making storms more intense, melting glaciers and putting at risk the future of seaside cities such as Miami. The level of CO2 broke 400, as a daily average, for the first time last May. Less than a year later, the average for a month has exceeded a threshold not seen in the measured record dating back 3 million years.

Economists Back Increased US Oil and Gas Exports

[Boston Globe, Apr. 30] NEW YORK — Whether to allow more exports of US oil and natural gas has become a matter of political debate in Washington. But to economists, the answer is clear: The nation would benefit. The vast majority of economists surveyed this month by The Associated Press say lifting restrictions on exports of oil and natural gas would help the economy even if it meant higher fuel prices for consumers. More exports would encourage investment in oil and gas production and transport, create jobs, make oil and gas supplies more stable, and reduce the US trade deficit, they say. As domestic energy production has boomed, drilling companies have pushed to be allowed to sell crude oil and natural gas overseas, where they can command higher

prices. Such exports are restricted by dated energy security regulations. Those opposed to opening trade say exports could make it more expensive for Americans to heat their homes and fill up their cars. But even economists who think exports might increase fuel prices for US consumers — an open question — say the overall benefit to the economy would outweigh any possible harm. It would be better to allow the exports and use tax breaks or other methods to help those struggling with higher prices, they say.

Oil Price Falls on Supplies Rise, Russia Sanctions

[Arizona Daily Star, Apr. 30] The price of oil fell to near \$100 a barrel on Wednesday as a report showed an increase in U.S. crude stockpiles and investors shrugged off the impact of new sanctions on Russia. By early afternoon in Europe, benchmark U.S. crude for June delivery was down 97 cents to \$100.31 a barrel on the New York Mercantile Exchange. On Tuesday, the Nymex contract rose 44 cents to close at \$101.28. Brent crude, an international oil benchmark, was down 61 cents to \$108.37 on the ICE Futures exchange in London. A rise in supplies suggested demand is not as strong as expected. The American Petroleum Institute said late Tuesday that U.S. stockpiles of crude oil expanded by 3 million barrels last week, while a survey of analysts by Platts, the energy information arm of McGraw-Hill Cos., had been expecting a rise of 2.1 million barrels. Data from the Energy Department's Energy Information Administration — the market benchmark — will be out later Wednesday.

State Energy Plan Would Alter New York Utilities

[New York Times, May 4] New York State is proposing to turn its electric utilities into a new kind of entity that would buy electricity from hundreds or thousands of small generators and set prices for that electricity and for the costs of running the power grid. The proposal anticipates a radically different electric system, dominated by decentralized production, much of it of renewable, intermittent energy sources like solar or wind power. The Public Service Commission is considering how the utilities would have to change. Instead of distributing electricity themselves, the utilities would effectively direct traffic, coordinating distribution of electricity produced by a multitude of smaller entities, according to an outline published last month by the commission, which regulates utilities. "It's really quite a revolutionary change that's being proposed," said Charles A. Zielinski, a lawyer in Washington who specializes in electricity and who was chairman of the New York commission from 1978 to 1981. "It's a big deal," Mr. Zielinski said. "If New York can pull this off, it would be huge." In the 1990s, the state pushed companies like Con Edison to sell their generating stations to independent producers, and to become primarily distribution entities. Now they would become traffic cops in a two-way flow of power. The new report predicts the gradual decline of big generating stations. In their place, the commission envisions rooftop solar panels, small wind turbines and small generating stations using natural gas to make both electricity and steam, which would be used for cooling or heating their immediate area. Some of these generators would be linked in "micro-grids" intended to stay afloat during a blackout. The underlying idea is that the existing system of regulation does not encourage the utilities or independent parties to produce a cleaner, more efficient energy grid. The Public Service Commission will hold a public session on the proposal next Monday.

U.S. to Store Gasoline for Crises in the Northeast

[New York Times, May 2] WASHINGTON — The federal government will build its first gasoline storage reserves in the New York Harbor area and in New England in response to the shortages suffered after Hurricane Sandy, the secretary of energy, Ernest J. Moniz, is to announce on Friday. Together, the reserves will hold about a million barrels of gasoline and cost about \$215 million. The fuel is intended to be held back in case another disaster cripples regional fuel supplies. Energy Department officials envision the reserves as the first in a series that will be built in parts of the country vulnerable to extreme weather, believed to be caused by global warming. "In addition to our mitigation and international efforts, the president's Climate Action Plan calls on us to take measures today in order to better prepare for the effects of climate change we already see occurring here at home." Mr. Moniz said in a statement. Fuel shortages were one of the most widespread problems after Hurricane Sandy in October 2012. Two New York-area fuel refineries were shut down, and hundreds of gas stations lost power, leading to severe gasoline shortages. Some New York gas stations were without fuel for as long as 30 days. In addition, 25 of the region's 127 fuel terminals — which hold gasoline, heating oil and diesel fuel supplies that are delivered by pipeline, ship or local refinery — were shut down. The Pentagon eventually delivered 24 million gallons of fuel to the storm-ravaged region.

INDUSTRIES AND TECHNOLOGIES

China Fuels Highest Solar Silicon Demand Since 2011

[Bloomberg, Apr. 29] The polysilicon industry is headed for its biggest boom since a price war started three years ago. It can thank a burst of solar-panel orders in China and Japan. Demand for the commodity used to make photovoltaic cells will jump 15 percent this year, the most since 2011, Bloomberg New Energy Finance forecasts. The price of the material, made from superheated silicon particles and sliced into wafers, has reached its highest since the middle of 2012. Global sales may top \$6 billion at that price. Manufacturers led by GCL-Poly Energy Holdings Ltd. (3800) of China and Wacker Chemie AG in Germany are expanding production, anticipating higher revenue will restore their margins. They're benefiting from a renaissance in the renewable energy industry, which last year rivaled fossil fuels for new power generation capacity added worldwide. "We are seeing a massive recovery in the entire solar industry, also in polysilicon," said Stefan De Haan, a solar analyst at IHS Inc. "2013 was the year of the turnaround, and the situation will further improve in 2014."

Energy Dept. Report Finds Major Potential To Grow Clean, Sustainable U.S. Hydropower

[Energy.gov, Apr. 29] WASHINGTON – Building on the Obama Administration's commitment to an all-of-the-above energy strategy, the Energy Department and its Oak Ridge National Laboratory released a renewable energy resource assessment today detailing the potential to develop new electric power generation in waterways across the United States. The report estimates over 65 gigawatts (GW) of potential new hydropower development across more than three million U.S. rivers and streams –equivalent to the current U.S. hydropower capacity. These findings demonstrate one of the ways the United States can further diversify its energy portfolio with sustainable and clean domestic power generation.

Microgrid: How the Military Connection Advances the Technology

[Energy Efficiency Markets, Apr. 28] When you think about it, the military's interest in microgrid technology makes sense: With its need for facilities to stay powered all day every day, getting off the grid is critical. "Microgrids provide the military with energy security and reliability 24-7 and 365 days a year. They need power if the entire world disappears around them," says John Carroll, business development director for Intelligent Power & Energy Research Corporation (IPERC), a New York-based company that manufactures microgrid controls and is a contractor for installations on four bases. The military isn't the only organization that thinks the Navy, Army and other arms of the government need to get into microgrids and renewable energy. The Department of Defense recently published a report, "Quadrennial Defense Review," an assessment of U.S. defense readiness, which focuses on the growing threat that climate change poses to military capabilities and global operations. In addition, the United Nations' Intergovernmental Panel on Climate Change report says that we'll be seeing more and more extreme weather across the globe. Given all these pressures, Carroll predicts that the market for microgrids in the military is in the tens of billions of dollars. "The total available market is huge," he says. What's more, the military's interest in microgrids is fueling the interest of municipalities and utilities. "The military is the technology leader. Every utility is looking at the Department of Defense for how they are deploying microgrids. At conferences all over the country, utilities and municipalities are coming together to understand what the military has been doing," he says. "The military is absolutely the leader."

Mine Waste Transformed To Tap Water for 80.000 Consumers

[Bloomberg, May 2] Anglo American Plc (AAL) was the first company to transform the wastewater from its coal mines into something 80,000 people drink. Now they're seen as a model. Purifying contaminated waters from three sites in South Africa has proven so successful that Anglo's plant in Witbank is doubling in size and being replicated elsewhere in the country by BHP Billiton Ltd. (BHP), the biggest mining company, and Glencore Xstrata Plc. (GLEN) While the \$130 million plant won't upend the \$600 billion world water industry, Anglo's treatment center provides as much as 12 percent of the area's municipal drinking supply and serves as a template for how the industry could treat waste in the future. It also shows how companies and municipalities are finding new ways to confront an increasingly water-stressed planet. Water of a different sort --sewer water -- is similarly about to be treated, purified and pumped back to residents in Wichita Falls, Texas, to augment shortages caused by growth and the area's worst drought on record.

New Ideas in Lighting Get Closer to Market

[New York Times, May 4] WOBURN, Mass. — Ever since government regulations began phasing out the traditional light bulb in 2012, the once-simple visit to the lighting aisle has become an exercise in navigating a dizzying array of choices and terminologies, especially for new kinds of compact fluorescents and LEDs. Now, those choices are about to become even more complicated. Two start-up companies are poised to begin selling bulbs that use entirely different technologies — one borrowed from heavy industry and the other from old-fashioned televisions —

but meet the new energy standards. Whether they can capture customers who remain stubbornly wedded to incandescent light is anybody's guess. But that both have come this far is an indication of how unsettled the consumer lighting market remains, despite years of promotion for the new energy-saving options. "It's going to be a really long putt to try to replace the incandescent," said Mark Rea, director of the Lighting Research Center at Rensselaer Polytechnic Institute. "People hate change of any kind. We make light sources today that are better than incandescent by any metric at delivering the benefits you're expecting from lighting. But it's different." Indeed, incandescent bulbs — whether leftover store inventory of standard lights or halogen models that meet the new regulations, which went fully into effect in January — outsell other types by far at big-box stores like Home Depot and Lowe's, lighting executives there say. In the last quarter of 2013, according to statistics from the National Electrical Manufacturers Association, incandescent bulbs accounted for 65 percent of shipments from manufacturers, with the remainder consisting of mainly compact fluorescents. Even as government officials, manufacturers and retailers focus their efforts on improving and marketing LED technology, researchers and entrepreneurs have been pursuing others, convinced that none of the options on the market offer consumers a close enough match to the familiar light quality at a low enough price. LED bulbs, for example, offer light quality that many experts say is equal to or better than the traditional incandescent bulbs, but their price — often \$10 a bulb or less after starting out several years ago at about twice that — has scared off consumers.

LEGISLATION AND REGULATION

Court Decision Paves Way for Higher Energy Savings

[Energy Manager Today, May 1] A court settlement approved on the 24th means that the US Department of Energy (DOE) will have to redo important gas furnace energy efficiency standards. But the good news is that this gives us the opportunity to press for even stronger furnace standards, and that's good news for battling high heating bills as well as climate change. In today's order, the US Court of Appeals for the DC Circuit okayed a settlement between DOE and an industry trade association and others that will send energy efficiency standards for residential gas furnaces developed in 2011 back to DOE for another look. These standards, which should have been providing savings to consumers already, have been hung up in the court for two years. While it's disappointing they never went into effect, the settlement ends the delay and gives DOE the opportunity to come up with new ones that we hope will be even stronger. The settlement also removes the risk that new standards for heat pumps and air conditioners – issued at the same time as the furnace standards and scheduled to become effective next year — also would have been delayed by the litigation.

Energy Benchmarking Law Goes from Cities to County

[Fierce Energy, Apr. 30] Montgomery County, Maryland, has become the first county in the country to pass an energy benchmarking law, which requires commercial building owners to track and report the facility's energy use. Nine major cities -- Austin, Boston, Chicago, the District of Columbia, Minneapolis, New York City, Philadelphia, San Francisco, and Seattle -- have, thus far, enacted similar laws to cut energy waste, lower utility bills, and reduce greenhouse gas emissions. Montgomery County's new law was part of a package of nine energy bills and unanimously passed to require the annual benchmarking of energy use in county-owned nonresidential buildings with an initial deadline of June 1, 2015; the benchmarking of privately owned nonresidential buildings of 250,000 or more square feet by December 1, 2016; and the benchmarking of private nonresidential buildings of 50,000 to 250,000 square feet by December 1, 2017. Better managing the energy use of those buildings will lead to energy and cost savings on a large scale. The county will assemble a working group on the law's implementation for private-sector buildings. Benchmarking data must be verified by a licensed professional before the first submission and every three years thereafter.

India Rejects US Request for WTO Panel To Settle Trade Dispute

[PV-Tech.org, May 1] The World Trade Organization (WTO) has dropped an initial request by the United States to set up a panel to review the controversial domestic content requirement in India's national solar programme. The WTO was forced to refuse the US' request for the review, made in February, after India rejected the demand. The WTO's Dispute Settlement Body decided to drop the request following a meeting on 25 April where it considered the US case. India and the US have been locked in a trade dispute over the second phase of India's JNNSM national solar programme, which it claims precludes US companies. The first phase of the JNNSM ruled that developers must source PV equipment and modules from domestic sources, but excluded thin-film modules, meaning US companies could still export thin-film modules for use as part of the JNNSM. But under the JNNSM second phase, the government announced half of the 750MW of

projects up for grabs would fall under a DCR that this time included thin-film modules. The move meant US thin-film manufacturer, First Solar – which previously dominated India's thin-film market – missed out on DCR projects in JNNSM II. However 375MW was still left open, with no DCR, and many state-run solar programmes are unrestricted with opportunities for foreign trade, outside of the JNNSM. The US request for a consultation back in February 2013 formally initiated the WTO dispute, after India previously launched anti-dumping investigations against solar manufacturers from the US.

Mexico Lays Out Energy Reform Rules for Private Companies

[Associated Press, Apr. 30] MEXICO CITY — The Mexican government on Wednesday unveiled its proposed rules for a historic opening of the state-owned oil and energy industry, saying contracts and production licenses should be put out for public bid and go to the company that offers the best return. Energy Secretary Pedro Joaquin Coldwell said the service station monopoly of state-owned Petroleos Mexicanos would fade only gradually as the necessary distribution and other infrastructure is made ready. Private companies will not be allowed to immediately open gas stations to compete with it. Joaquin Coldwell said that Mexican suppliers would be given preference in contracts over foreign firms in cases where both offer the same terms. And he said that Mexico would seek a goal of ensuring 25 percent "national content" goal in energy projects. The rules must still be approved by Congress. Mexico nationalized the oil industry in 1938, but in recent years Petroleos Mexicanos has struggled with falling oil production and an inability to harness new gas and oil deposits in deep ocean water or in shale deposits. And more than seven decades of state ownership have neither ensured prosperity for Mexico nor provided low gas and oil prices. A bloated union, corruption within the state-owned oil company and the government's dependence on oil revenues to fund public spending have reduced any benefits that might have trickled down to the average citizen. The proposed regulations aim to make the oil industry more transparent by make information on projects and bidding available to the public on the internet.

Plumbers Vote for Insulated Hot Water Pipes

[Energy Manager, Today, May 1] Members of the International Association of Plumbing and Mechanical Officials (IAPMO) voted to change the Uniform Plumbing Code to require insulation of hot water pipes in new homes and commercial buildings. The change should cut hot water waste by 15-30 percent and save energy in the process. The change stipulates that hot water pipes be insulated for all homes and commercial buildings built after 2015. By incorporating this proposal into the next edition of the International Association of Plumbing and Mechanical Officials' model plumbing code, officials bring this change to communities in Nevada, California, Idaho, New Mexico, North Dakota and jurisdictions around the country that use IAPMO's Uniform Plumbing Code as the model for their own local codes.

Supreme Court Upholds EPA Regulation on Cross-State Pollution

[Phoenix Business Journal, Apr. 29] The U.S. Supreme Court sided with the Environmental Protection Agency in a case involving the agency's limits on power plant emissions that travel across state lines. On a 6-2 ruling, the court upheld the agency's Cross-State Air Pollution Rule, a regulation that had been struck down by a lower court. The regulation curbs nitrogen oxide and sulfur dioxide emissions in 27 states whose emissions contribute to pollution in downwind states. A lower court ruled the EPA's method for determining how much these upwind states should reduce emissions wasn't fair to some states. This court also ruled states should be given a second chance to submit plans for reducing emissions after EPA disapproval of their original plans. The Supreme Court disagreed, ruling EPA's focus on what emissions could be cost-effectively reduced was reasonable and that the Clean Air Act doesn't require the agency to give states a second shot at coming up with their own emissions reductions plans. The ruling is a victory not only for the EPA's efforts to reduce power plan emissions, but also for residents of downwind states.

WESTERN POWER

California City Looks to Sea for Water in Drought

[Associated Press, May 5] SANTA BARBARA, Calif. — This seaside city thought it had the perfect solution the last time California withered in a severe drought more than two decades ago: Tap the ocean to turn salty seawater to fresh water. The \$34 million desalination plant was fired up for only three months and mothballed after a miracle soaking of rain. As the state again grapples with historic dryness, the city nicknamed the "American Riviera" has its eye on restarting the idled facility to hedge against current and future droughts. "We were so close to running out of water during the last drought. It was frightening," said Joshua Haggmark, interim water resources manager. "Desalination wasn't a crazy idea back then." Removing salt from ocean water is not a far-out idea, but it's no quick drought-relief option. It takes years of planning and overcoming red

tape to launch a project. Santa Barbara is uniquely positioned with a desalination plant in storage. But getting it humming again won't be as simple as flipping a switch. After the plant was powered down in 1992, the city sold off parts to a Saudi Arabia company. The guts remain as a time capsule — a white elephant of sorts — walled off behind a gate near the Funk Zone, a corridor of art galleries, wineries and eateries tucked between the Pacific and U.S. 101. The city estimates that it will need \$20 million in technological upgrades, a cost likely to be borne by ratepayers. Any restart would require city council approval, which won't vote until next spring after reviewing engineering plans and drought conditions. Santa Barbara, population 89,000, has enough water for this year and even next year by buying supplemental supplies and as long as residents continue to conserve. While it may seem like a head-scratcher to put the plant in hibernation soon after it was built, officials said the decision saved the city millions of dollars in unnecessary operating costs.

Geothermal Plant in Nevada Goes Hybrid with Solar Thermal

[Energy Prospects West, Apr. 29] In a world's first for renewable energy, Enel Green Power North America is boosting the juice generated at its existing 47.2-MW Stillwater geothermal power plant in Churchill County, Nev., by integrating it with a new solar-thermal array. The \$15-million solar-thermal power plant, currently under construction, will rely on a unique parabolic-trough technology provided by Colorado-based SkyFuel. The company uses a glass-free reflective film instead of conventional mirrors to concentrate sunlight and create additional steam for the medium-temperature Stillwater geothermal plant. The concentrating solar power project will tie 17 MW of thermal generating capacity into the Stillwater geothermal facility and will use the same turbine generator as the binary-cycle geothermal system. This will add approximately 3 million kWh per year. The CSP plant will have an electric generating capacity of 2 MW, clarified Enel in an email. The project is scheduled for completion by the end of this year. Once the CSP generation comes on line, it will be sold under Enel's existing 20-year power purchase agreement (PPA) with NV Energy.

Governor Asks Obama To Protect Missile Range

[Associated Press, Apr. 29] ALBUQUERQUE, N.M. - Gov. Susana Martinez is asking President Barack Obama and U.S. Interior Secretary Sally Jewell to make sure that a proposed transmission line between Arizona and New Mexico doesn't hurt the Army's White Sands Missile Range. The Republican governor told the top federal officials in an April 22 letter that a Bureau of Land Management proposal to route 45 miles of the SunZia line through the range should be changed. "I am seriously concerned that the planned route for the project proposed an unacceptable national security risk," Martinez wrote in the letter, which was obtained by the Albuquerque Journal (http://ow.ly/whGRE). Martinez said New Mexico supports national efforts to develop alternative energy but that such development "should not negatively impact military missions at any of our installations." The SunZia project would carry renewable energy from solar and wind projects in eastern and central New Mexico to Western markets. It's expected to generate \$1.2 billion in private investment, but the Defense Department opposes the proposed route through southern New Mexico. White Sands officials have said that if the project is approved as is, it could reduce testing operations at the range by up to 30 percent, potentially threatening national security. That also could mean layoffs at White Sands, which employs thousands and has an estimated \$834 million annual economic impact in New Mexico.

Seattle City Light Completes Community Solar Project

[Fierce Energy, Apr. 30] Seattle City Light is celebrating the installation of the largest solar array at any aquarium on the West Coast (Seattle Aquarium), as part of the utility's Community Solar and Green Up programs. The \$330,000, 49.4 kW system covers a large portion of the south side of the Seattle Aquarium's roof with 247 solar panels. Most of the panels produce electricity on behalf of 187 City Light customers who bought 1.800 units of solar power through the utility's Community Solar program. The rest of the panels serve as a demonstration project through the utility's voluntary Green Up renewable energy program with the electricity produced helping to power the Aquarium's operations. "This innovative project lets customers promote and benefit from solar even if they rent, have shady roofs or can't make the big investment of installing their own solar system," Sephir Hamilton, Chief of Staff for Seattle City Light, said. "When customers invest in solar, they also think harder about reducing their own electricity use in order to make the most of their solar production credits." Participants receive credit on their City Light accounts for their portions of the solar panels' output through 2020 along with all state production incentives, amounting to \$1.15 per kilowatt-hour. City Light estimates that participants will receive more than \$150 worth of electricity and production incentives for each unit purchased by the end of their agreements.

Study: Desert Soil Captures and Stores Lots of Carbon

[Energy Prospects West, Apr. 29] A group of researchers led by a Washington State University biologist has found that the top meter of soil in arid landscapes captures and stores a surprising amount of carbon as CO_2 levels increase in the atmosphere. The findings, published in Nature Climate Change on April 6, are the result of a decade-long experiment in the Mojave Desert, where researchers exposed plots of land to elevated CO_2 levels, similar to those projected to occur by 2050. They also exposed other plots of land to air with current levels of CO_2 , and others to no extra air. The researchers then analyzed the top meter of soil in all of the samples, to measure how much carbon it had absorbed. They found that desert soils may increase their carbon uptake enough in the future to account for 15 to 28 percent of the amount being absorbed by land surfaces, according to a WSU release announcing the study results. Under current atmospheric CO_2 levels, the researchers found that arid lands increase carbon uptake to account for 4 to 8 percent of current emissions.

Toyota Joins California Hydrogen Push in Station Funding

[Bloomberg, May 2] An employee fills up a Toyota Motor Corp. fuel cell vehicle (FCV) prototype, right, with hydrogen in Tokyo. Toyota is backing FirstElement Fuel as California provides grants worth \$46.6 million for hydrogen-fuel stations that will help companies including Toyota, Hyundai Motor Co. and Honda Motor Co. build a market for hydrogen fuel-cell vehicles arriving this year and next. Toyota Motor Corp. (7203) is funding a startup led by General Motors Co.'s former marketing chief to speed up the opening of hydrogen-fuel stations in California needed for zero-emission cars. Toyota is backing FirstElement Fuel, led by Joel Ewanick, with at least \$7.2 million, according to letters filed with the California Energy Commission and obtained by Bloomberg News. FirstElement, based in Newport Beach, California, plans to operate pumps and sell hydrogen for passenger cars from at least 19 new stations in California.

ARIZONA STATE INCENTIVES/POLICIES

ARIZONA COMMERCE AUTHORITY (ACA)

INCENTIVES

Arizona has lowered taxes, streamlined regulations, and established a suite of incentives to support corporate growth and expansion. The Arizona Competitiveness Package, groundbreaking legislation adopted in 2011, makes it easier for existing Arizona companies to prosper and establishes Arizona as one of the most desirable places for expanding companies to do business. Give your company a competitive edge by utilizing Arizona's incentives.

- Job Training
- Quality Jobs
- Qualified Facility
- Computer Data Center Program
- Research & Development
- Foreign Trade Zone
- Military Reuse Zone
- Angel Investment
- Renewable Energy Tax Incentive
- Healthy Forest
- Sales Tax Exemption for Machinery and Equipment
- Lease Excise
- Additional Depreciation
- Work Opportunity
- Commercial/Industrial Solar
- SBIR/STTR
- Private Activity Bonds
- QECB's

- **↓** (ACA) PROGRAMS
- **4** DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE)
 - Arizona Incentives/Policies
 - Federal Incentives/Policies
 - Solar Policy News DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

The following solicitations are now available: (Click on title to view solicitation)

- Commercial Building Technology Demonstrations Concept Paper Submission Deadline: March 31, 2014. Full Application Submission Deadline: May 19, 2014.
- Bioenergy Technologies Incubator Close Date: May 23, 2014
- Clean Energy Manufacturing Innovation Institute for Composite Materials & Structures Close Date: June 19, 2014
- Sunshot "Race to the Roof" Initiative Registration Due: October 31, 2014
- Energy, Power, and Adaptive Systems Close Date: November 3, 2014
- Energy for Sustainability Response Due: February 19, 2015
- Advanced Fossil Energy Projects Solicitation Number: DE-SOL-0006303 Expiration Date: November 30, 2016
- NSF/DOE Partnership on Advanced Frontiers in Renewable Hydrogen Fuel Production Via Solar Water Splitting Technologies 2014-2016 Close Date: Dec. 11, 2014
- Energy Department Announces Next Phase of L Prize Competition to Create Innovative Energy-Saving Lighting Products – Notification of Intent to Submit Product minimum of 30 days, but no more than 45 days prior to product submission. Monetary prize goes to the first successful entrant with the earliest timestamp.
- Repowering Assistance Program Ongoing
- Rural Business Enterprise Grants Ongoing
- Rural Business Opportunity Grants Ongoing
- Sustainable Agriculture Research and Education Grants Ongoing
- Renewable Energy RFP's Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines
- U.S. Dept. of Agriculture Rural Development Grant Assistance
- Green Refinance Plus Ongoing

ENERGY-RELATED EVENTS

2014

Windpower 2014
May 5-8, 2015 Las Vegas, NV

- Cybersecurity Summit May 7, 2014 Scottsdale, AZ
- AWEA Windpower 2014 May 5-8, 2014 Las Vegas, NV
- AZ Water Association Annual Conference & Exhibition May 7-9, 2014 Glendale, Arizona.
- Beyond the Border: Arizona Trade Mission to Mexico City & Guadalajara May 12-16, 2014
- Sunshot Grand Challenge Summit 2014 May 19-22, 2014 Anaheim, CA
- Dept. of Energy's 13th Annual Small Business Forum & Expo June 10-12, 2014 Tampa, FL
- Native American Economic Development & Energy Projects Conference June 16-17, 2014 Anaheim, CA
- ♣ AZBio Expo 2014

 June 19, 2014 Scottsdale, AZ
- 4 32nd Annual West Coast Energy Management Congress June 25-26, 2014 Seattle, WA
- Solar 2014: 43rd Annual Conference July 6-10, 2014 San Francisco, CA
- National Geothermal Summit August 5-6, 2014 Reno, NV
- 2014 ACEEE Summer Study on Energy Efficiency in Buildings August 17-22, 2014 Pacific Grove, CA
- EPI's 4th Annual Energy Policy Research Conference September 4-5, 2014 San Francisco, CA
- HTUF 2014 National Meeting The Forum for Action in High-Efficiency Commercial Vehicles
 September 22-24, 2014 Argonne, National Lab Argonne, IL
- Geothermal Energy Expo September 28-October 1, 2014 Portland, OR
- Solar Power International Oct. 20-23, 2014 Las Vegas, NV
- GreenBuild International Conference & Expo October 22-24, 2014 New Orleans, LA
- Governor's Celebration of Innovation November 13, 2014
- **ASU** Sustainability Series Events
- Green Building Lecture Series
 Granite Reef Senior Center Scottsdale, AZ